



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,564	03/14/2001	Venkatesh Vadde	NC17537	4264

26343 7590 07/19/2004

STEVEN A. SHAW
NOKIA, INC.
6000 CONNECTION DRIVE
MD 1-4-755
IRVING, TX 75039

EXAMINER

TSE, YOUNG TOI

ART UNIT

PAPER NUMBER

2634

DATE MAILED: 07/19/2004

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/808,564

Applicant(s)

VADDE, VENKATESH

Examiner

YOUNG T. TSE

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 4-7 are objected to because of the following informalities:

In claim 4, line 11, "of real part" should be – of the real part --; lines 14, 22, 29 and 35, "symbol" should be – symbols --; lines 16, 20, 24, 26, 30-31, and 32-33, "a second set of a" should be – the second set of the --; lines 18, and 34, "the real part said one" should be – the real part of said one of --; and line 23, "of" should be – or --.

Wherein claim 5 depends upon claim 4.

In claim 6, lines 3 and 26-27, "imaginary part" should be – an imaginary part --; line 11, "of real part" should be – of the real part --; lines 14, 23, 30 and 36, "symbol" should be – symbols --; lines 16-17, 20-21, 25, 27, 31-32, and 33-34, "a second set of a" should be – the second set of the --; lines 29 and 36, "the real part said" should be – the real part of said --; line 33, the word "value" should be deleted; line 34, the word "equal" should be deleted; and line 35, "the real part said one" should be – the real part of said one of --.

Wherein claim 7 depends upon claim 6.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

Art Unit: 2634

art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 2 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 2 recites a signal unfolder which is a single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. See MPEP 2164.08(a) or *In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983).

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 3-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 3, Applicant is requested to clarify the difference between "a plurality of complex time samples are modulated on an in-phase carrier" (lines 3-4) and "a plurality of complex time samples modulated on an in-phase carrier" (lines 7-9).

In line 1 of both claim 4 and claim 6, it is unclear what is meant by "shaping an envelope a complex signal"?

In both claim 4 and claim 6, the phrase "a second set of a plurality of sample symbols" is vague and indefinite since "a first set of a plurality of sample symbols" is not recited in the claims.

In claim 4 (line 21), claim 5 (line 1), claim 6 (line 22), and claim 7 (line 1), the phrases "said sample values" and "the steps" lacks antecedent basis.

In claim 6, lines 18-19, the parenthesis () should be avoided in order to avoid the confusion of the claimed subject limitation inside the parenthesis.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Gans et al..

Gans et al. (U.S. Patent No. 5,943,372) discloses a transmitter circuit in Figure 4 comprising a digital data signal source 120, a carrier signal source 142, a modulator 144, a RF filters and amplifiers 146, and a transmission section for transmitting the shaped envelop signal of the modulated signal to a receiver circuit.

With respect to claim 1, the interleaver 138 of the digital data signal source is provided to rearrange the data of the digital data of the signal to the modulator 144 for modulating the samples of the digital data signal and the carrier signal generated by the carrier data source 142 and the envelope of the modulated signal is shaped by the RF filters and amplifiers 146 (col. 4, lines 21-36 and col. 5, lines 6-12). Applicant note, when the transmitter is operated in a phase shift keying or a quadrature amplitude modulation scheme, the carrier signal generated by the carrier data source 142 is an in-phase carrier signal or a quadrature-phase carrier signal.

With respect to claim 3, a receiver circuit is shown in Figure 6 which is operated in the inverse manner of the transmitter circuit of Figure 5, it is well known to a person skill in the art that the rearrange data signal generated by the interleaver 138 is required to reconstruct the digital data signal into the original digital data signal by the receiver.

8. Claim 2 is rejected under 35 U.S.C. 102(e) as being anticipated by Borland.

Borland (U.S. Patent No. 6,343,217 B1) discloses a transceiver in Figure 2 and Figure 3 includes a PCM coder, an RF transmitter, an RF receiver, and a PCM decoder for sampling an audio signal into a PCM data stream, modulating the PCM data stream onto a carrier, transmitting the carrier, receiving the carrier, demodulating the PCM data stream from the carrier, and generating a reconstructed audio signal from the PCM data stream (abstract).

With respect to claim 2, the receiver comprises a circuitry for reconstructing the audio signal from the PCM data stream which is derived from a transmitter for sampling an audio signal into the PCM data stream and modulating the PCM data stream onto a

Art Unit: 2634

carrier (col. Col. 2, lines 35-40). Applicant note, when the transmitter is operated in a phase shift keying or a quadrature amplitude modulation scheme, the carrier signal generated by the RF transmitter is an in-phase carrier signal or a quadrature-phase carrier signal.

Allowable Subject Matter

9. Claims 4-7 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

10. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to show or suggest a method for envelope shaping of a complex signal by keeping an amplitude of each of sample symbols at or below a threshold value and setting the sign of an imaginary part of each of a set of a plurality of the sample symbols to a positive and a negative and the amplitude value of the imaginary part of each of the set of the plurality of the sample symbols equal to one half the amplitude of a real part of one of a sample symbols if the real part of one of the sample symbols is greater than the threshold value.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Young Tse** whose telephone number is **(703) 305-4736**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Stephen Chin**, can be reached at **(703) 305-4714**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Application/Control Number: 09/808,564
Art Unit: 2634

Page 7

P.O. Box 1450

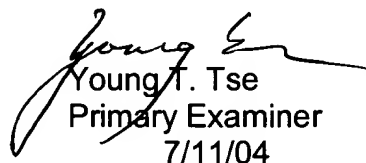
Alexandria, VA 22313-1450

or faxed to:

(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.


Young T. Tse
Primary Examiner
7/11/04